

GEHMAN LAW PLLC

EX PARTE OR LATE FILED

September 10, 2009

FILED/ACCEPTED

SEP 11 2009

Federal Communications Commission
Office of the Secretary

ORIGINAL

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Notice of ex parte presentation of Sensus USA Inc. in GN Docket Nos. 09-47, 09-51, 09-137, Implementation of Smart Grid Technology

Dear Ms. Dortch:

On behalf of Sensus USA Inc. (Sensus), and pursuant to Section 1.1206 of the Commission's rules, 47 C.F.R. § 1.1206, attached please find Sensus's notice and summary of ex parte presentation. The presentation was made by Britton Sanderford and George Uram of Sensus, by telephone and email, to Nick Sinai, Charles Worthington and one other member of the Commission's National Broadband Task Force. Attached is a deck of slides that was emailed to Charles Worthington and as well as a summary of verbal comments given by Sensus.

Prior to commencement of the above referenced docket, Sensus was approached by the National Broadband Task Force for information gathering and follow up on the Smart Grid Workshop conducted August 25, 2009. Nevertheless, because the FCC-requested conversation occurred subsequent to public notice of the docket, this notice of ex parte presentation is submitted.

Please contact the undersigned if there is a question.

Very truly yours,



Julian P. Gehman

No. of Copies rec'd
List ABCDE

0 + 2

Summary of ex parte presentation of Sensus USA Inc. to FCC National Broadband Task Force

Referencing the FCC's Smart Grid Workshop conducted on August 25, 2009, Sensus USA Inc. (Sensus) partially concurs with slide five of the slide deck presented by Trilliant Inc., entitled "Bandwidth Is Critical." Sensus concurs that the aggregate bandwidth required by most or all smart metering and smart grid applications that are being requested by large electric utilities adds up to approximately 10 Mbps. However, Sensus does not concur that this translates into a need for 10 to 30 MHz of new spectrum. This is so because not every smart grid application goes to every single end point. In fact only a few smart grid applications get delivered to any given end point and the 10Mbps is a value of the aggregate data flows to a utility head end system

Sensus delivers smart grid applications totaling up to about 10 Mbps in the aggregate by using up to 300 kHz of licensed 900 MHz spectrum. Sensus does so by, among other things, utilizing licensed spectrum; taking advantage of the propagation characteristics and other benefits of 900 MHz spectrum; re-using spectrum via the FCC's channelization schema at 900 MHz and geographically via a cellular architecture; utilizing fiber, microwave or other backhaul from tower-based collectors; and utilizing other standard frequency optimization techniques such as advanced frequency modulation and data compression. Sensus has observed that most electric utilities are natural monopolies. Consequently, Sensus believes there will be just one smart grid network at any given location with occasional but important overlaps at the edges of power networks and interconnection corridors between networks and sectors.

Based on this experience, Sensus believes that if the FCC decides to allocate spectrum for smart grid applications,

- (1) the allocation should be strictly limited to the purpose of smart metering and smart grid management by electric utilities and their vendors, and not be so broad that other applications such as conventional broadband service would be allowed; and
- (2) the allocation should be limited 300 kHz to 1 MHz of licensed spectrum in the 900 MHz band, utilizing a channelization scheme similar to that of narrowband PCS or MAS. Sensus believes that this amount of licensed 900 MHz spectrum would more effectively deliver smart grid applications than 10 to 30 MHz of unlicensed or shared spectrum in the 1.8 GHz band.

Sensus appreciates being invited to participate and looks forward to submitting more detailed comments in response to the Commission's notice of inquiry.

Sensus Licensed Spectrum

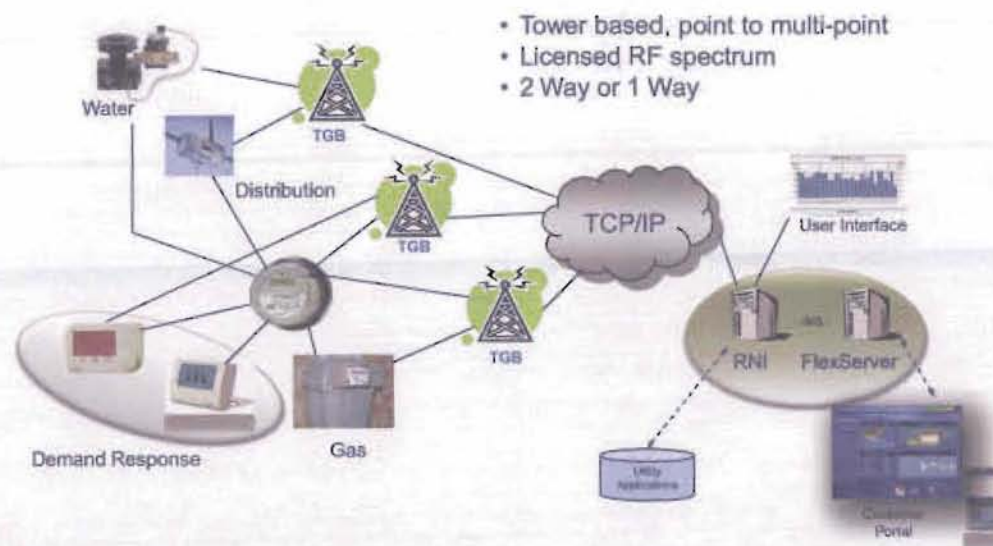
Spectrum

Description

- Nationwide PCS (channel N3 in US)
 - Two 50 KHz pairs
 - Used mainly for electric AMI applications
- MAS in 600+ markets
 - Two 50 KHz pairs
 - Used mainly for water/gas applications
 - Covers most of the US
- Nationwide PCS (channel N4 in US)
 - Two 50 KHz pairs
 - For additional electric applications, DA & DR
- Additional nationwide PCS in US (in process)
 - 50/75 KHz pair
 - DA & DR
- Canada spectrum
 - Two 50 KHz pairs
 - Controlled by Canadian partner

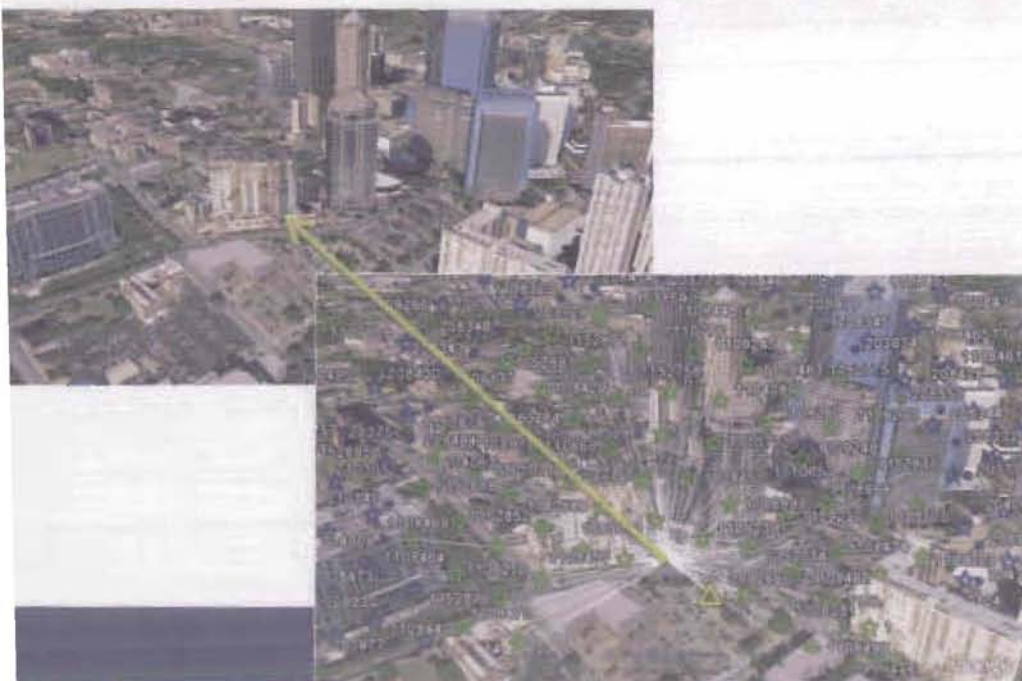
SENSUS

FlexNet Architecture



SENSUS

High Rise Buildings in Downtown Atlanta



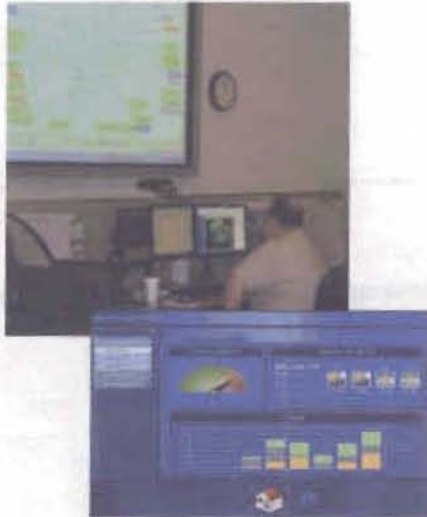
FlexNet Range Advantage




	SENSUS	OTHERS
Antenna Height	80' to 600'	4' to 20'
Transmit Power	2 Watts	1mW to 500 mW
Sensitivity	-130 dBm	-100 dBm to -110 dBm
In-Band Noise	1-3 dB	10 dB to 40 dB

SENSUS


Smart Grid Automation Applications



- Reclosers
- Breakers
- Switches
- Sectionalizers
- Capacitors
- Voltage Regulators
- Faulted Circuit Indicators
- UG Vaults
- Feeder Meters
- Distributed Generation
- Demand Response




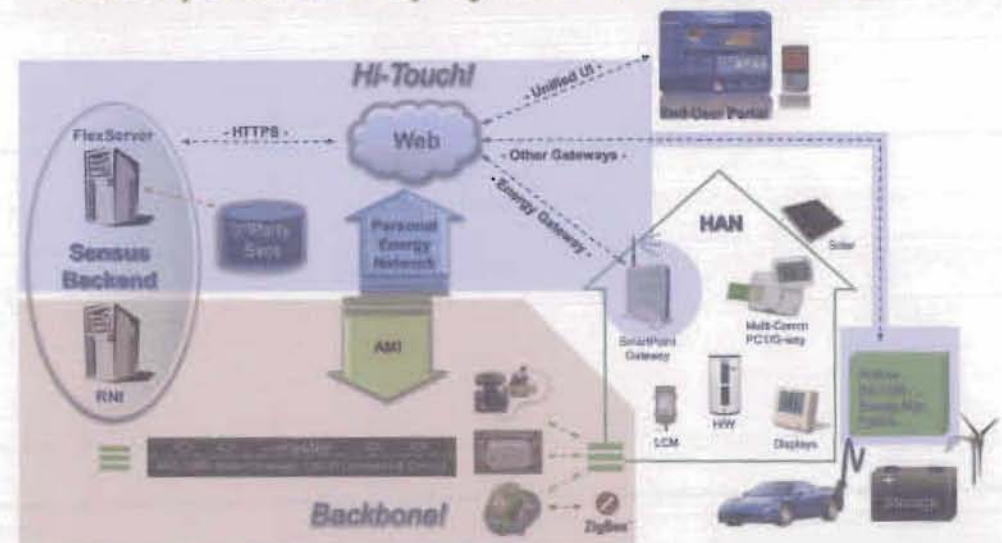
Long Range for Dispersed Apps

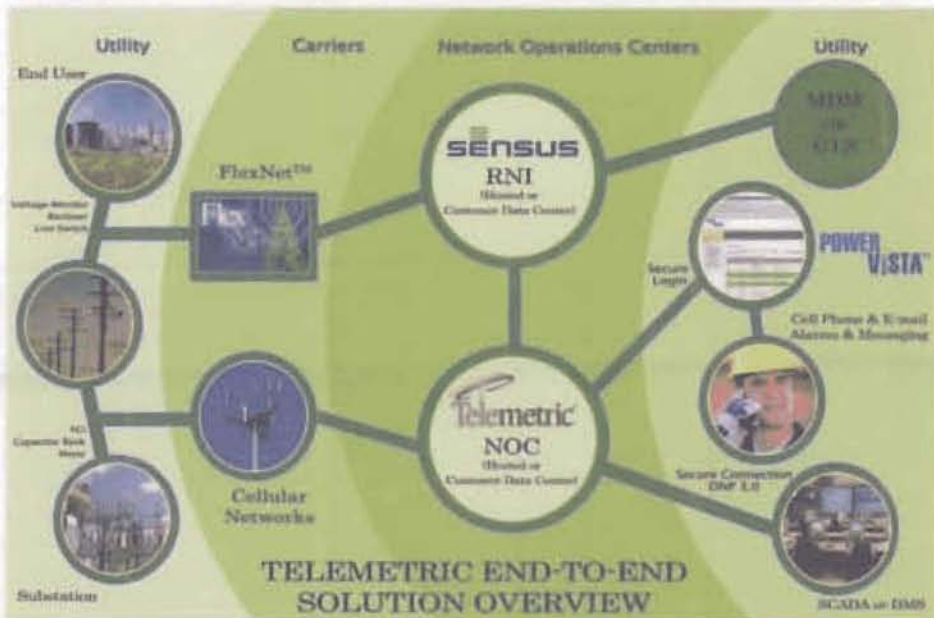


DA Capability Requirements

[illegible]

HAN (Smart Grid) Systems Architecture





Sensus Acquisition of Telemetric

- Acquisition announced July 1, 2009
- Provides Telemetric products with FlexNet radios
- Enables customers use of all the Smart Grid functions provided by Telemetric's hardware, network services and PowerVista application
- Existing cellular services provided by Telemetric will continue to work in a seamless manner with FlexNet enabled devices

SENSUS

SENSUS

Faulted Circuit Indicator Solutions



Underground



Overhead

- Reduce O&M costs
- Dispatch crews directly
- Significantly reduced outage time
- Improved customer satisfaction



SENSUS

Partial List of Customers



SENSUS

Expanding Existing VAR Management

- Reduce O&M Costs
- Central control with local fall-back
- Improved reliability & efficiency
- Precise VAR/Voltage control
- Sensus/Telemetric DNP-RTM
- Sensus Power Vista Software



SENSUS



- Installed on 700+ feeders
- Single phase voltage monitors
- Reliability Reporting S/W
 - Pinpoints outages
 - Creates PUC Reports
 - SAIDI/MAIFI
- Reports by:
 - Feeder
 - Substation
 - Area/state



Telemetric

SENSUS

Voltage Regulators — Substation and Line

Benefits

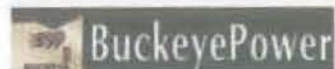
- DR (conservation voltage reduction)
- Optimize system for peak load periods
- Obtain better planning information
- Receive immediate notification of regulator issues



Telemetric

SENSUS

Voltage/Outage Monitoring



330+ Delivery Points

- Monitor momentary and permanent outages
- Instant notification of OV/UV events

Benefits

- Improved response time
- Better communication with member coops



Telemetric

SENSUS

Load Shedding

Irrigation load shedding

- Reduced coincidental peak
- Two-way communications
- Significant improvement over time/temperature systems

Benefits:

- Reduced peak demand
- Lower energy costs
- Fast ROI



Telemetric

SENSUS

Switch Automation

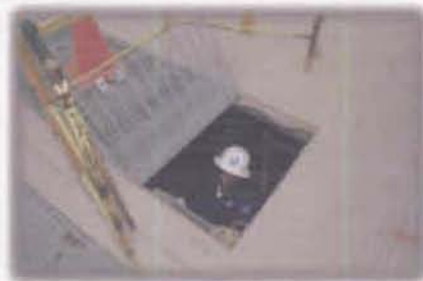
- Reduced O&M Costs
- Greater Visibility
- Faster Dispatch
- Faster Sectionalizing
- DNP/2179 over IP
- Two-way IP-Addressable
- Improved reliability & efficiency
- Sensus/Telemetric DNP-RTM
- Sensus Power Vista Software



SENSUS

Vault Automation

- Improved reliability
- Customer satisfaction
- Load information
- Enable distribution SCADA
- Reduce maintenance costs
- Better asset management
- Safety



Telemetric

SENSUS

Demand Response



Benefits

- Reduced time needed to get all generators "online"
- Reduced peak demand



Telemetric

SENSUS

Smart Grid Now - High Voltage Monitoring



SENSUS